



Plant Disease in Kansas

Hurricane Isaac: Will it threaten SE Kansas soybeans?

Special points of interest:

- *Soybeans at risk from Hurricane Isaac*
- See <http://extension.missouri.edu/p/G4442> for information on soybean rust
- *Walnut Trig Beetle surveys*

Hurricane Isaac is tracking northward from states on the Gulf where Asian soybean rust is present. Could it infect Kansas soybeans and affect production of already reduced crop? The answer is yes and we really don't know.

Hurricanes are soybean rust dispersal machines. The moisture, temperature, and cloud cover protect the fragile spores from drying out and UV light exposure. There is no doubt that soybean rust which is notable in some parts of Mississippi and Louisiana will be carried northward to soybean producing areas. If projections do hold up, the extreme eastern counties of Kansas could see Isaac. If that occurs, it is a very possible situation that rust spores will make it into the sunflower state and infect soybeans.

The next question is will it affect production and that answer is a bit harder to digest. **Temperatures** are important for the

spores to develop, high temperatures above 82 degrees F are unfavorable for development. The more above this temperature threshold results in a much greater reduced potential for rust. **Cloudy** days are important because of the impact of UV light on spores. For the rust to develop, ideal conditions are consistent cloud cover and temperatures in the lower 80's. A few **showers and storms** and the recipe is complete. Rust will be off to the races. The second part of the equation will be the **stage of crop development**. Double cropped late soybeans that are usually a main stay of the cropping system in extreme southeast Kansas are at greatest risk compared to earlier planted soybeans to the north that are filling grain.

We have had Asian soybean rust in the state before (2007) but really not of any noticeable levels for production losses. History is on our side. Watch the

weather though, there is always a first time. With plenty of beans in SE Kansas still in early pod and development, a potential problem exists. Below is the excerpt from today's soybean rust predictions in the National PIPE system.

Risk Area: Wet deposition of spores will continue to be a risk even after Isaac passes the immediate spore areas, as flooding and low evaporation rates will affect sites. Transport will likely be widespread, further north into Louisiana and Arkansas and possibly into the South Central Plains. A slight risk of wet deposition exists late in the week at the Texas and Mexico sites, while significant transport from these sites will not be a major concern.



Tan Rust Lesions on Leaf

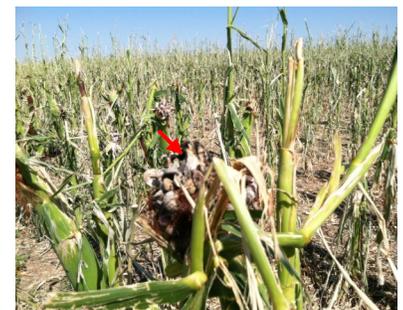
Other diseases current in the crop are sudden death syndrome, charcoal rot, soybean cyst nematode, Cercospora leaf blight, bacterial blight, and bacterial pustule.

Corn fields smutted by hail

In early August survey of Northwest Kansas crops and drought monitoring, corn was found to be in pretty good shape. The one stand out issue for corn was common corn smut. In some fields of southern Thomas County where hail was severe, an epidemic of the smut was observed. Many fields had incidences of 30-50% infection of the head. Granted, the hail damage was severe and the crop was lost but the smut disease was simply

out of hand. It was as if it was planted to smut. By the way, in some cooking circles this mushroom is considered a delicacy.

See smut image right, red arrow.



PLANT PROTECTION AND WEED CONTROL PROGRAM

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Plant Protection and Weed Control Program

Plant Protection and Weed Control staff work to ensure the health of the state's native and cultivated plants by excluding or controlling destructive pests, diseases and weeds. Staff examine and analyze pest conditions in crop fields, rangelands, greenhouses and nurseries. Action taken to control potential infestations of new pests, whether they are insects, plants diseases or weeds, is beneficial to the economy and the environment.

Our Mission is to:

- Exclude or control harmful insects, plant diseases, and weeds;
- Ensure Kansas plants and plant products entering commerce are free from quarantine pests;
- Provide customers with inspection and certification services.

The Plant Disease Survey in Kansas has been conducted since 1976. The survey addresses disease situations in field crops, native ecosystems, and horticultural trade. The Kansas Department of Agriculture works cooperatively with Kansas State University and Extension programs, United States Department of Agriculture, and various commodity groups.



INVASIVE SPECIES

Walnut twig beetle trapping, survey for 1000 Cankers disease of Walnut

This summer, Kansas Department of Agriculture has undertaken a trapping program for detection of the walnut twig beetle. This tiny beetle as seen below is responsible for moving the *Geosmithia* fungus, that causal agent of 1000 cankers disease of walnut. The

disease and beetle are excluded from Kansas by an exterior quarantine and have not been reported.

This is the first year of the survey for the insect after a male aggregation pheromone was developed. The department is

focusing on urban areas as the disease travels long distances through man's activities. Such places as truck overnight areas, sawmills, tree debris collection sites,

firewood lots, and campground areas are higher risk for introduction and being used for trapping sites.

A 4 funnel Lindgren trap used for WTB trapping, below.

On a side note: The Kansas Forest Service is celebrating 125 of service to the people of Kansas. You can help by attending the Open House from 2-6 pm on Thursday, October 4. The location is 2610 Claflin Road in Manhattan.

Congratulations to our tree stewards and a word of thanks.



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